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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,357	02/14/2006	Ramesh Mantha	213222-00106	2714

27160 7590 12/30/2008

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EXAMINER	
NG, FAN	

ART UNIT	PAPER NUMBER
4145	

MAIL DATE	DELIVERY MODE
12/30/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/568,357	**Applicant(s)** MANTHA, RAMESH	
	Examiner FAN NG	**Art Unit** 4145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *41-60* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *41-43,46-50,52,53 and 56-59* is/are rejected.

7)☐ Claim(s) *44,45,51,54,55 and 60* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/14/06, 05/04/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the label of each box of each figure, as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after

the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim(s) 41-51 is/are rejected under 35 U.S.C. 101 because

The claimed invention is directed to non-statutory subject matter. The claim does not specify what performs the method steps, which measure and monitor data in receiver and determine a format for the transmitter. No physical structure is specified, thus it is non-statutory. The office has not interpreted transmitter and receiver as physical structure, because they are not performing the method steps.

Appropriate correction is required.

Because of claim(s) 41 is/are rejected, therefore its dependent claims 42-51 are also rejected.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim(s) 41-43, 46, 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh (2003/0037084) in view of Keskitalo (2345188) and Walton (2003/0086371).

5. As per claim 41, A method of determining block formats to be used to transmit blocks of data from a transmitter to a receiver over a channel subject to fading, the method comprising:

6. **Walsh teaches** measuring a reception-quality of data received by the receiver over the channel from the transmitter **([0044]: signal quality is measured, note, "those parameter indicative of the signal quality")**;

7. monitoring a measure of the rate of change of the reception-quality of data received by the receiver over the channel from the transmitter **([0044]: since all those parameters represent signal quality, thus rate of change of signal amplitude is the same as rate of change of the reception quality. In addition, the signal is coming from communication channel [0001])**;

8. and if the measure of the rate of change of the reception-quality indicates that measurements of the reception-quality are being obtained **(the parameter is monitored in [0044] and used in [0045], thus it is obtained)**

9. and provided to the transmitter fast enough so that each measurement of reception-quality is a reasonably accurate estimate of the reception-quality at which the receiver will receive the next block to be transmitted **([0044] suggest feedback and it is inherent, that measured parameter will be transmit back as soon as possible, since the channel condition is changing, thus the faster the original transmitter gets the channel data the better estimate, it can have)**,

10. Walsh doesn't teach …then determining a format for the next block to be transmitted by the transmitter to the receiver using the most recent measurement of reception-quality provided to the transmitter

11. but otherwise, determining a format for the next block to be transmitted by the transmitter to the receiver using an average of a portion of the reception-quality measurements received by the receiver over the channel from the transmitter

12. **Keskitalo teaches** then determining a format for the next block to be transmitted by the transmitter to the receiver using the most recent measurement of reception-quality provided to the transmitter **(First, the title teaches the limitation. Secondly, col. 4, line 4-10: base station transmits base on the mobile station's signal**

quality. Here the transmitter is base station and receiver is mobile station. Also transmitter determine the format of next block is the same as phasing the signal, because signal gets phased is the same as gets format in certain meaning),

13. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Keskitalo into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and Keskitalo suggests the beneficial use of different format according to the signal quality, such as to signal quality tells ask some thing about the channel, thus we should according to the channel and change the format of the data to compensate the effect, they are in the analogues art of communication protocol.

14. **Walsh and Keskitaol do not teach** but otherwise, determining a format for the next block to be transmitted by the transmitter to the receiver using an average of a portion of the reception-quality measurements received by the receiver over the channel from the transmitter

15. **Walton teaches** but otherwise, determining a format for the next block to be transmitted by the transmitter to the receiver using an average of a portion of the reception-quality measurements **([104]: data transmitted based on average SNR, average SNR is the same as reception quality. Also format a block to data can be interpreted as prepare a block of data, which every transmitter does)** received by

the receiver over the channel from the transmitter **(Fig. 3, from #352 to #324)**.

16. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Walton into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and Walton suggests the beneficial use of average received signal quality, such as some time the received signal fluctuate, it is better to use average, they are in the analogues art of communication protocol.

17.

As per claim 42, **Walsh, Keskitalo, and Walton teach** the method of claim 41, **Walsh teaches** wherein the measure of the rate of change of the reception-quality of data transmitted over the channel from the transmitter to the receiver is determined periodically **([0013] and [0018], shows the measure of the perimeters is save or update in fixed period)**, but with a different period or phase than measurements of reception-quality of data transmitted over the channel from the transmitter to the receiver are made **(it is inherent that the measure of rate of change must be different from measure the reception quality, because the rate is measured using more than two sample in a time frame)**.

As per claim 43, **Walsh, Keskitalo, and Walton teach** the method of claim 41,

18. **Walsh and Walton do not teach** wherein the channel is a wireless channel, the receiver is a subscriber station, and the transmitter is a base station

19. **Keskitalo teaches** wherein the channel is a wireless channel, the receiver is a subscriber station, and the transmitter is a base station **(Fig. 1)**.

20. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Keskitalo into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and Keskitalo suggests wireless, subscriber, base station, such as they are essential element of a wireless network, they are in the analogues art of communication protocol.

21.

As per claim 46, **Walsh, Keskitalo, and Walton teach** the method of claim 41, **Walsh teaches** wherein the measure of the rate of change of the reception-quality is determined from a sequence of reception-quality measurements **([0044]: "rate of change of amplitude" "rate of change coefficients", amplitude and coefficients represented the reception quality, because they are estimate from channel)**.

22. As per claim 49, **Walsh, Keskitalo, and Walton teach** the method of claim 41, **Walsh teaches** wherein each reception-quality measurement is mapped to a set of transmit-control bits using a quantization mapping **([0044]: all the coefficients are in digital format since they are inside an adaptive filter, they must have been convert to digital data first. Also quantization is a necessary part to convert analog data to digital)**,

23. **Walsh, Walton do not teach** each set of transmit-control bits is transmitted from the receiver to the transmitter in a slotted frame of data, and each transmit-control bit is carried in a discrete slot of the frame.

24. **Keskitalo teaches** each set of transmit-control bits is transmitted from the receiver to the transmitter in a slotted frame of data, and each transmit-control bit is carried in a discrete slot of the frame **(col. 1, 30: this is the basic idea of TDMA)**.

25. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Keskitalo into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and Keskitalo suggests to use TDMA to transmit data, such as use TDMA protocol to avoid interference from another user, since each user has their own slot time to transmit, they are in the analogues art of communication protocol.

26. Claim(s) 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh (2003/0037084) in view of Keskitalo (2345188) and Walton (2003/0086371) as applied to claim 46, and further in view of Marble .

27.

As per claim 47, **Walsh, Keskitalo, and Walton teach** the method of claim 46,

28. **Walsh, Keskitalo, and Walton do not teach** wherein the measure of the rate of change of the reception-quality is determined by finding the frequency spectrum of the sequence of reception-quality measurements.

29. **Marble teaches** wherein the measure of the rate of change of the reception-quality is determined by finding the frequency spectrum of the sequence of reception-quality measurements **(page 190, right col. Line 5-8: indicating the equivalence of FFT (signal spectrum) and rate of change)**.

30. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Marbo into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and Marble suggests FFT is the same as rate of change, such as FFT is very easy to compute than measure their rate of change.

31. Claim(s) 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh (2003/0037084) in view of Keskitalo (2345188) and Walton (2003/0086371) as applied to claim 41 and further in view of Kwak (7149192).

32.

As per claim 48, **Walsh, Keskitalo, and Walton teach** the method of claim 41,

33. Walsh teaches

34. … the rate of change of the reception-quality… **([0044])**

35. **Walsh, Keskitalo, and Walton do not teach** wherein the measure of … is determined from the rate at which the receiver is requesting retransmissions over the channel from the transmitter

36. **Kwak teaches** wherein the measure of … is determined from the rate at which the receiver is requesting retransmissions over the channel from the transmitter **(col. 3, line 4-7: how good is the channel quality is determined from retransmission rate)**.

37. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Kwak into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and Kwak suggests determine the channel quality from retransmission, they are in the analogues art of communication protocol.

38. Claim(s) 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh (2003/0037084) in view of Keskitalo (2345188) and Walton (2003/0086371) as applied to claim 49 and further in view of Carter (3648239).

39.

As per claim 50, **Walsh, Keskitalo, and Walton teach** the method of claim 49, wherein there are five transmit-control bits in the set of transmit-control bits, four of which are quantized data bits **(the number of bit to quantize is a pure design chose, because**

the more control bit, needs more time to feedback and more error will occur, but more accurate, on another hand fewer control bits will give only rough estimate, but less drawback as above)

40. **Walsh, Keskitalo, and Walton do not teach** and the fifth bit is a parity bit generated by XORing the four data bits together, and wherein the slotted frame has 15 slots

41. **Carter teaches** and the fifth bit is a parity bit generated by XORing the four data bits together, **(col. 10, line 47-49 and col. 14, line 46-49: parity bit is generate by using XOR of others bits in the packet)**.

42. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Carter into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and carter suggests to use parity bit, such as it help to correct error, they are in the analogues art of communication protocol.

43. and wherein the slotted frame has 15 slots (it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on Appellant.) In re Mason, 87 F.2d 370, 32 USPQ 242

(CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In reBoesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). (Using the above parameters or values since it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value).

44. Claim(s) 52-53, 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh (2003/0037084) in view of Keskitalo (2345188), Walton (2003/0086371) and Jagadeesan (7039716).

45. As per claim 52, an apparatus operable to transmit blocks of data in frames to a plurality of subscriber stations over a shared channel subject to fading, comprising:

46. **Walsh teaches** a base station configured to receive **(Fig.1, is a adaptive receiver, which receives signal, can be consider as base station)** from at least one of the subscriber stations over a dedicated channel both **(the signal has to be come from some where, the transmitter can be consider as subscriber station, since both base station, and subscriber station are just a name for receiver and transmitter, moreover, if the receiver can receive the signal then the signal is go**

through a dedicated channel, because in wireless communication, every thing is broadcast, only way to make a dedicated channel is use particular frequency, and pre-assign to both transmitter and receiver):

47. (a) a measurement of reception-quality of each frame of data received **([0044]: reception quality is measured, [0040]: data from the channel is recoded …, and indicate every data bit is considered)** over the shared channel by that subscriber station **([0001]: data communication channel is shared, since at least two users use the channel, also data is coming in to the adaptive filter, thus it is a subscriber station)**

48. Periodically … of a portion of a series of measurements of the reception-quality of frames **([0013] and [0018]: measurement is periodically update)** of data received over the shared channel by that subscriber station **([0001]: data communication channel is shared, since at least two users use the channel, also data is coming in to the adaptive filter, thus it is a subscriber station)**,

49. wherein the base station is configured to determine a measure of the rate of change of the measurements of reception-quality of the frames of data **([0044])** received over the shared channel by that subscriber station **([0001]: data communication channel is shared, since at least two users use the channel, also data is coming in to the adaptive filter, thus it is a subscriber station)**

50. and, if the measure of the rate of change of the reception-quality indicates that measurements of the reception-quality are being obtained **(the parameter is monitored in [0044] and used in [0045], thus it is obtained)**

51. and provided to the base station fast enough so that each measurement of reception-quality is a reasonably accurate estimate of the reception-quality at which the subscriber station will receive the next block to be transmitted to it **([0044] suggest feedback and it is inherent, that measured parameter will be transmit back as soon as possible, since the channel condition is changing, thus the faster the original transmitter gets the channel data the better estimate, it can have)**,

52. **Walsh doesn't teach** … periodically transmitted average …

53. **Jagadeesan teaches** … periodically transmitted average … **(col. 7, line 65-67)**

54. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Jagadeesan into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and Jagadeesan suggests periodically transmitted the average, such as only average is transmit, communication bandwidth is saved, they are in the analogues art of communication protocol.

55. **Walsh and Jagadeesan do not teach** then determining a format for the next block to be transmitted by the base station to that subscriber station using the most recent measurement of reception-quality received by the base station

56. but otherwise, determining a format for the next block to be transmitted by the base station to that subscriber station using the average received from that subscriber station.

57. **Keskitalo teaches** then determining a format for the next block to be transmitted by the base station to that subscriber station using the most recent measurement of reception-quality received by the base station **(First, the title teaches the limitation. Secondly, col. 4, line 4-10: base station transmits base on the mobile station's signal quality. Here the transmitter is base station and receiver is subscriber station. Also transmitter determine the format of next block is the same as phasing the signal, because signal gets phased is the same as gets format in certain meaning)**,

58. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Keskitalo into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and Keskitalo suggests the beneficial use of different format according to the signal quality, such as to signal quality tells ask some thing about the channel, thus

we should according to the channel and change the format of the data to compensate the effect, they are in the analogues art of communication protocol.

59. **Walsh, Jagadeesan and Keskitalo do not teach** but otherwise, determining a format for the next block to be transmitted by the base station to that subscriber station using the average received from that subscriber station.

60. **Walton teaches** but otherwise, determining a format for the next block to be transmitted by the base station to that subscriber station using the average received from that subscriber station **([104]: data transmitted based on average SNR, average SNR is the same as reception quality. Also format a block to data can be interpreted as prepare a block of data, which every transmitter does)**.

61. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Walton into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and Walton suggests the beneficial use of average received signal quality, such as some time the received signal fluctuate, it is better to use average, they are in the analogues art of communication protocol.

62. As per claim 53, **Walsh, Jagadeesan, Keskitalo and Walton teach** the apparatus of claim 52, **Walsh teaches** wherein the measure of the rate of change of the

reception-quality of frames of data transmitted over the shared channel from the base station to the subscriber station is determined periodically **([0013] and [0018], shows the measure of the perimeters is save or update in fixed period)**, but with a different period or phase than measurements of reception-quality of frames of data transmitted over the shared channel from the base station to the subscriber station are made **(it is inherent that the measure of rate of change must be different from measure the reception quality, because the rate is measured using more than two sample in a time frame)**.

63. As per claim 58, **Walsh, Jagadeesan, Keskitalo and Walton teach** the apparatus of claim 52, **Walsh teaches** wherein each reception-quality measurement is mapped to a set of transmit-control bits using a quantization mapping **([0044]: all the coefficients are in digital format since they are inside an adaptive filter, they must have been convert to digital data first. Also quantization is a necessary part to convert analog data to digital)**,

64. **Walsh, Jagadeesan, Keskitalo and Walton do not teach** each set of transmit-control bits is transmitted from the subscriber station to the base station over a dedicated channel in a slotted frame of data, and each transmit-control bit is carried in a discrete slot of the frame.

65. **Keskitalo teaches** each set of transmit-control bits is transmitted from the subscriber station to the base station over a dedicated channel in a slotted frame of data, and each transmit-control bit is carried in a discrete slot of the frame **(col. 1, 30: this is the basic idea of TDMA)**.

66. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Keskitalo into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and Keskitalo suggests to use TDMA to transmit data, such as use TDMA protocol to avoid interference from another user, since each user has their own slot time to transmit, they are in the analogues art of communication protocol.

67. Claim(s) 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh (2003/0037084) in view of Keskitalo (2345188), Walton (2003/0086371) and Jagadeesan (7039716), as applied to claim 52 above and further in view of Marble.

68.

As per claim 56, **Walsh, Jagadeesan, Keskitalo and Walton teach** the apparatus of claim 52, **Walsh, Jagadeesan, Keskitalo and Walton teach do not teach** wherein the measure of the rate of change of the reception-quality is determined by finding the frequency spectrum of a sequence of reception-quality measurements.

Marble teaches wherein the measure of the rate of change of the reception-quality is determined by finding the frequency spectrum of a sequence of reception-quality

measurements **(page 190, right col. Line 5-8: indicating the equivalence of FFT (signal spectrum) and rate of change)**.

69. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Marbo into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and Marble suggests FFT is the same as rate of change, such as FFT is very easy to compute than measure their rate of change.

70. Claim(s) 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh (2003/0037084) in view of Keskitalo (2345188), Walton (2003/0086371) and Jagadeesan (7039716), as applied to claim 52 above and further in view of Kwak (7149192).

71.

As per claim 57, **Walsh, Jagadeesan, Keskitalo and Walton teach** the apparatus of claim 52,

72. **Walsh teaches** …the rate of change of the reception-quality …

73. **Walsh, Jagadeesan, Keskitalo and Walton do not teach** wherein the measure of …is determined from the rate at which the subscriber station is requesting retransmissions over the shared channel from the base station.

74. **Kwak teaches** wherein the measure of …is determined from the rate at which the subscriber station is requesting retransmissions over the shared channel from the base station **(col. 3, line 4-7: how good is the channel quality is determined from retransmission rate)**.

75.

Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Kwak into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and Kwak suggests determine the channel quality from retransmission, they are in the analogues art of communication protocol.

76. Claim(s) 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh (2003/0037084) in view of Keskitalo (2345188), Walton (2003/0086371) and Jagadeesan (7039716) as applied to claim 52 above and further in view of Carter (3648239).

77. As per claim 59, **Walsh, Jagadeesan, Keskitalo and Walton teach** the apparatus of claim 58, wherein there are five transmit-control bits in the set of transmit-control bits, four of which are quantized data bits **(the number of bit to quantize is a pure design chose, because the more control bit, needs more time to feedback and more error will occur, but more accurate, on another hand fewer control bits will give only rough estimate, but less drawback as above)**

78. **Walsh, Jagadeesan, Keskitalo and do not Walton teach** and the fifth bit is a parity bit generated by XORing the four data bits together, and wherein the slotted frame has 15 slots.

79.

Carter teaches and the fifth bit is a parity bit generated by XORing the four data bits together**(col. 10, line 47-49 and col. 14, line 46-49: parity bit is generate by using XOR of others bits in the packet)**.

80. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Carter into Walsh, since Walsh suggests to measure the rate of change of signal quality and suggest feedback to transmitter and carter suggests to use parity bit, such as it help to correct error, they are in the analogues art of communication protocol.

81. and wherein the slotted frame has 15 slots (it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on Appellant.) In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA

1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In reBoesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)) (Using the above parameters or values since it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value).

Allowable Subject Matter

82. Claims 44-45, 51, 54-55, 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

a. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FAN NG whose telephone number is (571)270-3690. The examiner can normally be reached on Monday-Friday; 7:30am-5:30pm.

b. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj Kumar can be reached on (571)272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

c. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

83. 84.

85. FN

/Pankaj Kumar/

Supervisory Patent Examiner, Art Unit 4145